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ON EXTRACTION OF SOFT CATARACT BY SUCTION.

THE remarks which I am about to offer are upon a subject of every day occurrence, and one that in some of its phenomena does not receive the attention that it deserves. An injury of the lens, as usually inflicted by the point of an umbrella or parasol, the prong of a fork, pieces of glass, gun-caps, fragments of coal, grains of gun-powder, and the various missles familiar to practitioners, is not confined to the lens alone, but is very often complicated with iritis, either occurring primarily, from the injury received by that structure in the course of the wound; or secondarily, from the swelling up of the lens, owing to the rupture of its capsule, permitting the aqueous fluid to flow in, distending its structure, and causing it to press forward upon the iris and ciliary process, giving rise to tedious, painful inflammation, with its serious results.

Almost daily, surgeons having much to do with ophthalmic practice meet with cases of this kind, where plainly the existence of iritis is not recognized, and irritating eye washes are prescribed, at the expense of valuable time, and the possibility of an occluded pupil; and yet these are the cases that are liable to occur to any one, and the ready diagnosis of which may turn the scale, for or against the eye.

Let us take a typical case. A man receives a blow or a puncture, with a sharp instrument. There is a wound of the cornea, a few lines in length; in the course of a day or

more, we see a cloudy opacity of the lens; and still further, a gaping wound of the capsule, with some portions of opaque lens-substance pushed out into the anterior chamber, which we also see is diminished in size; there is intense ciliary congestion, the cornea looks cloudy and roughened, the iris has lost its natural hue and shape; and even more than the loss of sight, the man complains of intense pain; pain in his temple, and back of his head, depriving him of sleep and comfort. His sufferings are so great, that he tells you he must have ease. Now what will relieve him? will leeching? will opium, will atropia instillation relieve him? Not always. What will do so? When the indications are present, make a linear opening in the cornea, introduce a curette, and allow the fluid lens tissue to run out. The man is relieved, and blesses the hand that saves him pain. This injunction, however, requires some qualification; in the cases of children, for example, for in them there is less danger of troublesome symptoms following these injuries; and we can afford to wait longer than we can in the cases of adults, or old people, in whom very little swelling of the lens will excite the most dangerous symptoms.

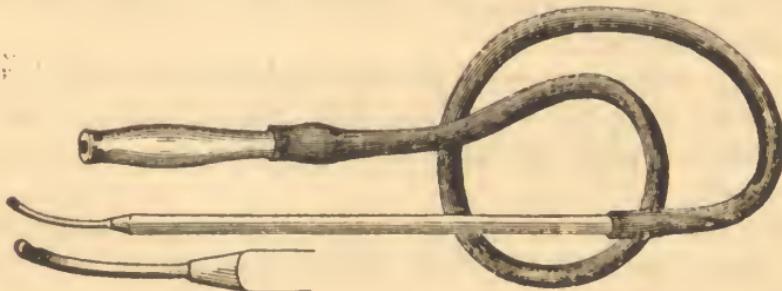
Cases of soft cataract are, as a general rule, readily curable by a needle operation. In those cases in which the lens assumes a semi-fluid form, the extravasation of its contents which appear to possess some irritating properties, not unfrequently gives rise to serious inflammation, and this untoward event is prevented by the operation of suction, by which the lenticular mater is immediately removed from the eye. Although in the following case the operation proved highly successful, I would not recommend its indiscriminate employment.

The needle operation has the advantage of doing all that can be done by suction, without its dangers. And that the wound of the cornea, and the interference with the eye in

suction, may lead to inflammatory trouble in certain cases, any one familiar with eye surgery must feel instinctively. It adds, however, one more resource to the armamentarium of the surgeon, and may be used in cases where rapidity of cure—regardless of possible risk—is a matter of some consideration. In performing this operation, Mr. TEALE recommends that the capsule be lacerated by two needles, introduced from opposite sides of the cornea. The capsule then to be freely torn open, and allowed to retract behind the iris. This is not necessary, and it would be a dangerous operation for every one to undertake. The force of this remark will be appreciated by any one who uses two needles for the first time.

Practically, it is much simpler to combine TEALE'S two steps in one. That is to say, open the cornea, and lacerate the capsule with one and the same instrument. This will appear shortly. The instruments required are the ordinary broad-cutting needle (such as is usually supplied in cases of eye instruments), and the suction apparatus. The cutting needle should make a wound large enough to admit the curette; nothing is gained by a larger opening.

The suction instrument is well portrayed in the woodcut; it is simply a light glass tube, with the tubular curette



fixed at one end, and the flexible tube with a mouth-piece at the other.

The curette "is the size of the ordinary curette, but differs from it in being roofed in, to within a line of its extremity, thus forming a tube, flattened on its upper surface, and terminating, as it were, in a small cup."

THE OPERATION.

The pupil having been fully dilated by atropia, the surgeon introduces the cutting needle at a point of the cornea opposite the dilated pupillary margin, passing on his instrument he ruptures the capsule of the lens, and if required, by a little lateral movement, increases the size of his incision.

Withdrawing the needle, the curette is introduced, and passed gently into the lens; taking care not to sink it too deeply into its substance, lest when suction is applied, the posterior capsule should be drawn in too forcibly, be ruptured, and produce prolapse of the vitreous, thus complicating, at least unnecessarily, the progress of the case.

The curette then being in position in the lens, suction is to be made gently and steadily; if made quickly, or by fits and starts, you withdraw too rapidly, or draw in tissues not desired.

By this method you will clear the pupil in a moment, and will have the cataract "bottled up" in the glass tube of your instrument.

In the following case, the eye had done so well by the third day after the operation, that with a two and a half inch convex glass the patient could read No. $4\frac{1}{2}$ of SNELLEN'S type.

For the report of the case I am indebted to Dr. Wm. W. McCCLURE, the excellent House-Surgeon of the Wills Hospital.

Mary F——, aged 45, single, of good general health, received a blow on the right eye, five weeks ago, resulting

in traumatic cataract. In the right, or cataractous eye, she had mere quantitative perception of light. The lens was quite opaque, and of a milky color. The pupil was active, and free from adhesions.

AUG. 9th, 1866. The operation was performed, as described above, without any difficulty, or drawback, and cleared the pupil completely. The patient at once could count fingers, and see the faces of persons surrounding her.

AUG. 10th. Free from pain. The dressings, with the exception of the adhesive strips, were removed; the eye and adjacent parts were bathed with a solution of atropia; a little being allowed to find its way in between the lids, without disturbing them.

AUG. 12th. (Four days after the operation.) The dressings were now thrown aside, vision having been completely restored, the eye in good condition, and the wound in the cornea healed.

AUG. 24th. Fifteen days after the operation, an examination at the patient's home gave the following results. With two and a half convex glass can read No. 2 of SNELLEN readily, and with a little effort can see No. $1\frac{1}{2}$, and no doubt in the course of another fortnight she will read the last with ease.

It is a little singular that Mr. DIXON, in the last edition of his work, when briefly treating of the operation by suction, supposed to have been originally employed by the ancient Persians, while referring particularly to MM. LAUGIER and BLANCHET, should make no mention of Mr. TEALE, to whom we are indebted for a very ingenious mode of practical application.

Mr. J. H. Gemrig, Surgeon's Instrument Maker, No. 109 South Eighth Street, Philadelphia, produces a curette fully equal to those made in England.

BIBLIOGRAPHY.

For those who may wish to follow up the literary history of the operation, I have appended a few references to authorities on the subject. I am indebted to Mr. TEALE for many of them; others I have added myself.

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